## Layout Versus Schematic

## Author: Jinhua Wang

 LVS is used to check if the layout connection is correct, compared to the schematic. Click Calibre -> Run nmLVS.

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- 2. Click **Cancel** when the **Load Runset File** window pops up. You may save a **runset** after finishing this tutorial for later use.
- 3. Set the LVS Rules File path to

## /home/ece4220/PDK/180nm\_TSMC/Required\_LIB\_Files/calibre.lvs

	Calibre Interactive - nmLVS v2017.3_38.30 _ 🗆 ×
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and set the LVS Run Directory as your working directory.

4.	Go to Inputs -> Netlist,	enable Export from	schematic viewer.
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 Go to Setup, enable LVS Options, go to LVS Options on the left side of the window, go to include, enable Include Rule Statements, and enter the following commands LAYOUT CASE YES SOURCE CASE YES

LVS COMPARE CASE NAMES

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<u>R</u> ules Inputs Outputs LVS Options	Supply       Report       Gates       Shorts       ERC       Connect       Inc <ul> <li>Abort LVS on power/ground net errors</li> <li>Abort LVS on Softchk errors</li> <li>Ignore layout and source ports during comparison</li> </ul>	lude Database Pro
Tr <u>a</u> nscript	Power nets: VDD	Load from file
Run <u>L</u> VS	Ground nets: VSS	Load from file
Start R <u>∨</u> E		

6. Go to Supply, for Power nets, enter VDD; for Ground nets, enter VSS (case sensitive).

7. Click **Run LVS** to run the LVS check. A report window will pop up.

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Options	SOURCE CELL NAME: Tutorial					
	INITIAL NUMBERS OF OBJECTS					
	Layout Source	Component Type				
	Ports: 5 5					

Correct your layout design if any errors are reported. The report window above is **desired** (two greens checks and one smiling face).

8. You may **save** this **runset** for later use so that you do not need to set it up every time.